

We claim:

- 1 1. A method, comprising:
 - 2 examining an MPEG stream;
 - 3 identifying packets in the MPEG stream that are associated with navigation
 - 4 points in a playback of the MPEG stream; and
 - 5 placing information on the identified packets in a navigation database.
- 1 2. The method of claim 1, wherein:
 - 2 examining an MPEG stream includes examining a transport stream.
- 1 3. The method of claim 1, wherein:
 - 2 the navigation database is in a separate file from the MPEG stream.
- 1 4. The method of claim 1, wherein:
 - 2 the navigation database is not encoded in the MPEG stream.
- 1 5. The method of claim 1, wherein:
 - 2 identifying packets includes identifying packets associated with selected
 - 3 presentation times in the playback.
- 1 6. The method of claim 1, wherein:
 - 2 identifying packets includes identifying a packet containing a video I-frame
 - 3 with a presentation time near one of the selected presentation times.

- 1 7. A method, comprising:
2 retrieving information on specified packets in an MPEG stream from a
3 navigation file that is separate from the MPEG stream; and
4 using the retrieved information to navigate the MPEG stream.

- 1 8. The method of claim 7, wherein using the retrieved information to navigate
2 includes:
3 identifying a point in the MPEG stream identified by the retrieved information;
4 processing the MPEG stream starting at the point; and
5 presenting at least a portion of the processed MPEG stream.

- 1 9. The method of claim 8, wherein:
2 presenting includes presenting video data.

- 1 10. The method of claim 8, wherein:
2 presenting includes presenting audio data.

- 1 11. The method of claim 8, wherein:
2 identifying a point includes identifying a video I-frame.

- 1 12. A machine-readable medium having stored thereon instructions, which when
2 executed by at least one processor cause said at least one processor to perform
3 operations comprising:
4 examining an MPEG stream;

identifying packets in the MPEG stream that are associated with navigation
points in a playback of the MPEG stream; and
placing information on the identified packets in a navigation database.

13. The medium of claim 12, wherein:

examining an MPEG stream includes parsing packets in the MPEG stream.

14. The medium of claim 12, wherein:

the navigation database is in a separate file from the MPEG stream.

15. The medium of claim 12, wherein:

the navigation database is not encoded in the MPEG stream.

16. The medium of claim 12, wherein:

identifying packets includes identifying packets associated with selected
presentation times in the playback.

17. The medium of claim 12, wherein:

identifying packets includes identifying a video I-frame with a presentation time
near one of the selected presentation times.

18. An apparatus, comprising:

a medium to provide an MPEG stream; and

an authoring tool coupled to the medium to examine the MPEG stream and to
produce navigation information for a navigation file separate from the
MPEG stream.

19. The apparatus of claim 18, further comprising:
a storage device to store the navigation file.

20. The apparatus of claim 18, further comprising:
a transmission interface to transmit the navigation file.

21. The apparatus of claim 18, wherein:
the authoring tool includes a processor and a computer program.

22. The apparatus of claim 18, wherein:
the navigation file includes data identifying specific points in the MPEG stream.

23. The apparatus of claim 18, further comprising:
a playback component to navigate the MPEG stream based on contents of the
navigation file.

24. A system, comprising:
a encoder to encode digitized video and audio data into packets in an MPEG
stream;
a navigation generator coupled to the encoder to:
examine the MPEG stream;

6 generate navigation information on packets associated with specific
7 presentation points in the MPEG stream; and
8 store the navigation information in a navigation file separate from a file
9 to store the MPEG stream; and
10 a decoder to read and decode portions of the MPEG stream identified by the
11 navigation information.

1 25. The system of claim 24, further comprising:
2 a player to present the decoded portions of the MPEG stream.

1 26. The system of claim 24, wherein:
2 the MPEG stream includes timing information for synchronized presentation of
3 the video and audio data.